

# DUAL MODE DEVICE AND METHOD FOR GENERATING VECTOR CROSS PRODUCTS OR DOT PRODUCTS

## ABSTRACT

A dual mode device and method is provided for generating cross product or dot product from a pair of vectors. The dual mode device generates a cross product or a dot product from a first vector and a second vector. The first vector has a first set of components and the second vector has a second set of components. The device includes a dual mode controller and a dual mode unit. The dual mode controller receives the first and second vectors and is configured to select vector components for evaluating a cross product component or a dot product in response to a first signal. The first signal indicates whether to generate a cross product component or a dot product. The dual mode unit is coupled to receive the selected vector components and generates the cross product component or the dot product in response to the first signal.